

Anolis sagrei (Brown Anole). *Gopherus polyphemus* burrow commensalism.

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Anolis sagrei is native to Cuba and the Bahamas, and has been introduced throughout many tropical and subtropical regions of the world (Kolbe et al. 2004). In Florida, USA, *A. sagrei* has established invasive populations across much of the state and occurs in sympatry with native *Gopherus polyphemus* (Gopher Tortoise).

Gopherus polyphemus excavate burrows that are used as refuge sites by approximately 60 species of vertebrates and more than 300 species of invertebrates (Jackson and Milstrey 1989; Witz et al. 1991). We report observations of a previously unreported *G. polyphemus* burrow commensal species.

On three separate occasions during March 2014, we observed *A. sagrei* using *G. polyphemus* burrows as retreat sites on an island in the intracoastal waterway near Marineland, Florida, USA (29.6236°N, 81.2106°W; WGS84). All three *A. sagrei* were adults and two were identified as males based on size and dorsal pattern. One *A. sagrei* was observed basking at the mouth of a burrow at 1000 h on 8 March 2014. It likely used the burrow as a retreat site overnight and had emerged to bask in the sunlight. After photographing the lizard, it retreated about 0.25 m inside the burrow. At 1100 h on 25 March 2014, we observed another *A. sagrei* flee about 2 meters across the ground to a burrow and about 15 cm inside. At 1630 h on 25 March

2014, we observed an adult of unknown sex about 15 cm inside a burrow and oriented facing out of the burrow. The lizard retreated at least 1 m inside the burrow after our approach.

Each *A. sagrei* used a different burrow, which varied in size of opening ($N = 3$, width = 31.3 ± 2.3 cm, height = 11.0 ± 1.3 cm) and maintenance. Two contained leaves and twigs at the mouth of the burrow, one of which was partially collapsed. The third burrow appeared well maintained at the mouth, but had a 10 cm hole in the top of its tunnel about 0.5 m behind the mouth. We were unable to confirm if the burrows were being actively used by *G. polyphemus*.

Although *A. sagrei* occupy a wide range of habitats, they usually associate with arboreal and semi-arboreal structure. We are unaware of any previously published accounts of burrow use by *A. sagrei*. We provide evidence that *A. sagrei* use *G. polyphemus* burrows as retreat sites, but it is unclear how often this occurs and how *A. sagrei* might affect the ecology and community structure of *G. polyphemus* burrows.

References

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